

REMARKSClaim Amendments

Several claims are amended to correct some informalities. New claims 50 - 55 are based on claims 15, 19, 24, 38, 42 and 49, respectively. No new matter is introduced by the claim amendments or the new claims. Entry into the record of these amendments and the new claims is in order. It is noted that in the January 29, 2008 Preliminary Amendment claims 48 and 49 were inadvertently omitted. Applicant re-introduced herein claims 48 and 49, which are substantially the same as those present in the Preliminary Amendment of October 11, 2005.

Restriction Requirement is Traversed

Applicant was required under 35 U.S.C. 121 to elect for prosecution one of the following group of claims:

- I. Claims 24-49, drawn to a method for making a light valve, classified in class 359, subclass 241.
- II. Claims 1-23, drawn to a light valve, classified in class 438, subclass 202.

In support of this requirement it was asserted that the inventions of Groups I and II are distinct, from each other because they are related as process of making and product made, insofar that the inventions are distinct if either or both of the following can be shown: (1) the process as claimed can be used to make another and materially different product or (2) the product as claimed can be made by another and materially different process (citing to MPEP § 806.05(f)). In this application, it was asserted, the optically active layer could be adhered to one of the substrates before the two substrates are adhered to each other.

The restriction requirement was said to be additionally justified because the inventions are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because at least one of the following apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant was advised that if he elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder, providing that all claims directed to a non-elected process invention include all the limitations of an allowable product claim(s). In the event of the rejoinder, the requirement for restriction between the product and process claims would be withdrawn and the rejoined process claims would be fully examined for patentability.

Office Action, pages 2-4.

Applicant was also advised that, to retain the right to the rejoinder, the process claims should be amended during prosecution to require the limitations of the product claims, and the failure to do so may result in a loss of the right to rejoinder. Office Action, pages 4-5.

Applicant respectfully disagrees with the restriction requirement and elects, with traverse Group II, claims 1-23 and new claims 50 and 51.

At the outset, Applicant respectfully points out that examination of this application pursuant to the restriction practice of the U.S. Patent and Trademark Office (USPTO) is improper as a matter of law and the USPTO rules. This application is a national stage of a PCT application, PCT/US2004/010979, and thus it must be examined under the unity of invention principles. According to the M.P.E.P. § 1850, when the Office considers international applications as an International Searching Authority, as an International

Preliminary Examining Authority, and during the national stage as a Designated or Elected Office under 35 U.S.C. § 371, PCT Rules 13.1 and 13.2 will be followed when considering unity of invention of claims of different categories without regard to the practice in national applications filed under 35 U.S.C. § 111. The M.P.E.P. also explicitly states that the decision with respect to unity of invention rests with the International Searching Authority or the International Preliminary Examining Authority. *Id.*

Applicant respectfully submits that the claims relate to a single general inventive concept, and therefore satisfy the unity of invention requirement.

Applicant respectfully points out that there was no unity of invention objection issued during the international phase of the application. See Notification of Transmittal of the International Search Report and the Written Opinion of the International Searching Authority, or the Declaration, of January 28, 2005, copy enclosed for the Examiner's convenience. Since the International Searching Authority decided there was unity of invention, it is improper for the USPTO to hold otherwise. For at least this reason, the restriction requirement is improper and must be withdrawn.

Please also see, *Caterpillar v. Commissioner of Patents & Trademarks*, 231 USPQ 590 (DC, E.D. VA 1986) wherein the court held that a U.S. national stage of a PCT application containing claims directed to a process and apparatus for its practice must be examined in the same application since they satisfy the requirement of unity of invention of the PCT rules. The same principle should apply to claims directed to an article (or articles) and to a process for manufacturing such article or articles, present in this application. Further support for Applicant's position is found, *inter alia*, in the Patent Cooperation Treaty, in particular the PCT International Search and Examination Guidelines, Chapter 10, Section 10.12.

The USPTO rules are consistent with the above principles. Thus, 37 C.F.R. § 1.475 states, in pertinent part:

"(b) ...a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories:

(1) A product and a process specially adapted for the manufacture of said product, or...

(3) A product, a process specially adapted for the manufacture of the said product, and a use of the said product..."

As pointed out in the Office Action, Applicant's claims are directed to a process for making a light valve (Group I: claims 24-49, and new claims 52-55) and a light valve (Group II: a light valve of claims 1-18 (and new claim 50); and a sealant of claims 19-23 (and a new claim 51)). Thus, claims 1-49 (and new claims 50-55) satisfy the unity of invention definition.

The unity of the invention, in view of PCT Rule 13, and 37 CFR 1.475,(b)(5), between the product, a light valve and materials included in it, of Claims 1 -23 and new claims 50, 51, and the process specially invented and adapted to manufacture it, of Claims 24-49, and new claims 52-55, is fulfilled, as described in the specification considered as a whole, e.g., in paragraph [010] at page 23 of the specification, where it is stated that a high production rate determined the materials, the product configuration, the manufacturing process, and the design of the production apparatus. The structures and materials covered by Claims 1-23 and new claims 50 and 51 were developed and selected to make them suitable for the claimed process.

For example, in the specification, Applicant stated that a problem with prior art light valves samples was that they were prepared by filling between two closely spaced sheets of glass an optically active aqueous polymer solution. To turn the polymer solution from a viscous liquid to a weak, cross-linked solid, soaked with solvent, or "gel", the polymer had to undergo additional processing, as described in the specification, e.g., at page 2, lines 4-16. To address this problem Applicant developed a new approach since a polymer with even a low degree of polymerization is too viscous for rapid filling. Applicant's invention includes the use of a solution of a monomer, so that both the polymer and the cross-links are formed substantially simultaneously after introducing the monomer, the cross-linker and the catalyst solution between the cover sheets. Using a monomer solution rather than a polymer solution decreases viscosity by a factor of approximately 1,000, with a consequent decrease in the fill time by a factor of approximately 50. See specification, page 4, lines 22-28. Applicant's Claim 1 states, in pertinent part that "... most of said polymer is formed between said cover layers by polymerizing a monomer which is dissolved in said solvent". Thus, Claim 1 refers to a "monomer solution" because the use of the monomer reduces fill time by a factor of 50 and thus increases production speed by a factor of 50.

Similarly, the processes in Claims 24-49 and 52-55 are designed and selected to be automated to enable high speed production of the claimed light valves. The product structure, raw materials, and manufacturing processes were all designed for high speed production of the claimed light valves. Furthermore, these three elements are generally designed to work together and their functions are complementary to each other.

In the Office Action it was stated at page 2 that "In the instant case the optically active layer could be adhered to one of the substrates before the two substrates are adhered to each other". Applicant respectfully traverses this assertion. As stated in the application, the monomer solution is not likely to cure (i.e., polymerize) if it is exposed to air. As stated in the specification at page 11, lines 5-8:

"Because, as with most free radical + vinyl polymerizations, oxygen inhibits polymerization by quenching free radicals, parts A and B must have dissolved atmospheric oxygen removed from them before adequate and repeatable polymerization can occur."

Furthermore, Applicant's experience has shown that it is not technically feasible to lay the second "substrate" on the "optically active layer", cured or uncured, without incorporating bubbles which are optically unacceptable. Since the oxygen needs to be removed when Applicant's inventive light valve is produced, the process suggested in the Office Action would not produce Applicant's invention.

The Examiner asserted that different claims "can be classified" in different classes and subclasses, as summarized above. However, different classification of claims is not necessarily an indication of the distinctiveness of various groups from each other. Art relevant to claims of Group I may be found in the class and subclass artificially assigned to Group II and vice versa. As stated in the M.P.E.P. § 803 "If the search and examination of all the claims in an application can be made without serious burden, the examiner must examine them on the merits, even though they include claims to independent or distinct inventions." Applicant respectfully submits that no undue burden will be placed on the USPTO in searching and examining all the currently pending claims in the same application.

In view of the above remarks, Applicant respectfully requests that the restriction requirement be withdrawn and that all claims be prosecuted in this application. In the event that the requirement is made final, and in order to comply with 37 CFR §1.143, Applicant reiterates his provisional election of Group II, including the new claims 50 and 51, as set

forth above. Applicant holds the remaining claims in abeyance under the provisions of 37 C.F.R. § 1.142(b) until final disposition of the elected claims.

An indication of allowance of all claims is solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-2478 and please credit any excess fees to such deposit account.

Respectfully submitted,

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